

**What is claimed is:**

1. A method for compensating for printer characteristics having a tone reproduction curve which is either too rough to be fitted by interpolation or which does not have a simple parametric function, comprising:

- a) placing a first set of control points on said tone reproduction curve;
- b) fitting a first smoothed curve to said first set of control points;
- c) moving a subset of points belonging to the set of first control points along the first smoothed curve;
- d) generating a second set of control points comprising the moved first control points and the remaining unmoved first control points;
- e) fitting a second smoothed curve to said second set of control points;
- f) determining a differential function between the first and second fitted curves;
- g) adding said difference to the original curve to produce a smoothly modified last curve, which retains the original curve's characteristics.

2. A method for compensating for printer characteristics, as in **claim 1**, wherein said first set of control points are placed on said original curve such that each point is representative of the behavior of the curve in the vicinity of the point.

3. A method for compensating for printer characteristics, as in **claim 1**, wherein the movement first control points indicates a desired change in that region of the curve of the original function.

4. A method for compensating for printer characteristics, as in **claim 1**, wherein the first smooth curve is represented by a parametric spline fitted through the first set of control points wherein  $X$  and  $Y$  are smooth spline functions of  $T$  passing through  $X_i(T_i)$  and  $Y_i(T_i)$ , where  $i$  is a control point index.

5. A method for compensating for printer characteristics, as in **claim 4**, wherein the movement of control points to a new position is by changing point  $j$  at  $X_j(T_j)$  and  $Y_j(T_j)$  to  $X'_j(T_j)$  and  $Y'_j(T_j)$ .

6. A method for compensating for printer characteristics, as in **claim 5**, wherein the fitting of the second smooth curve through the second set of control points is represented by  $X'(T)$  and  $Y'(T)$ .

7. A method for compensating for printer characteristics, as in **claim 6**, wherein the difference between curves is represented by:

$$x'(T) = x(T) + X'(T) - X(T)$$

$$y'(T) = y(T) + Y'(T) - Y(T)$$

where  $T$  is the distance along curve  $(x,y)$  and not along curve  $(x',y')$ .